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ABSTRACT

This document contains three papers on distance learning and human resource development (HRD). "An Exploration of Perceived Differences in Teaching Roles between On-Site and On-line Instruction" (James J. Kirk) reports on a study in which 144 online instructors at selected institutions across the United States were asked to share their perceptions about the effect of online instructional delivery on the following 9 traditional teaching roles: authoritarian; counselor; discussion monitor; evaluator; subject matter expert; information presenter; instructional designer; mentor; and role model. "Factors Affecting Student Completion in a Distance Learning Mediated HRD Baccalaureate Program" (Hui-Chin Chu, Barbara E. Hinton) analyzes the impact of the following factors on nontraditional adult students' completion of a distance learning-mediated baccalaureate degree-level HRD program: demographics; number of technical and general education hours transferred; and work-related and family-related variables. "Experiences of Web-based Instruction among African-American Students Enrolled in Training and Development Graduate Courses" (Saundra Wall Williams) reports on a study of the online experiences of graduate-level African-American students that focused on learner-instructor interactions and gave new insights as to why African-American students do not participate or continue to participate in Web-based courses at the graduate level. All three papers include substantial bibliographies. (MN)

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Distance Learning

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An Exploration of Perceived Differences in Teaching Roles between On-Site and On-line Instruction

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This investigation explored perceived changes in nine traditional teaching roles as experienced by 144 on-line instructors at selected institutions across the United States. Respondents were asked to compare the roles in terms of on-site versus their on-line teaching experiences. Significant differences were found with respect to role importance, role difficulty, role changeability, role satisfaction, and time required to perform the roles. The findings hold implications for those who recruit, hire, train, and supervise on-line instructors.

Keywords: Distance Learning, On-line Instruction, On-site Instruction

The rapid growth of the World-Wide-Web, is changing how people learn (Green, 1996). For example, in 1999 state colleges in Colorado reported enrollment growth in on-line courses to be up 117% over the previous year (Scanlon, 1999). Furthermore, it is estimated that in the near future 25% of all community college students will acquire part of their education via the Internet and that community colleges will compete nationally/internationally for students via distance learning technologies (Morrison, 1995). In recent months such organizations as the Metropolitan Life Insurance Co., (Swanson & Khirallah, 2000) and the United States Veterans Administration (Khirallah, 2000) announced plans to dramatically increase their on-line training offerings.

The rapid expansion of on-line courses has generated numerous studies on web-based-instruction. To date many of these studies have focused on learning outputs (Russell, 1997; Johnson, Aragon, Palma-Rivas, Shaik, & Bilsbury, 1999). The advent of web-based-instruction has also renewed lively discussion on educational theory and practice. According to Wilson (2000), "A major debate has surfaced about the basis of teaching and learning in an on-line environment. Of the current theories that support on-line teaching and learning, behaviorism has historically had the greatest impact." Individuals in both theoretical camps (i.e., behaviorist and constructivist) hold opposing notions about the appropriate roles of instructors (e.g., sage on the stage versus the guide on the side). Both behaviorist and constructivist want to bring their preferred teaching roles to their on-line instruction.

Rutherford (1977) contends many instructors have concerns about on-line teaching and are reluctant to embrace its technologies. One of their greatest concerns is the impact of technology on their teaching roles (Monaghan, 1995). While some authors have written about the teaching roles of on-line instructors (Berge, 2000; McMann, 1994; Danney & Martha, 1999), few studies have focused on how the on-line teaching environment impacts the traditional roles teachers perform in face-to-face classrooms or how instructors feel about how web technology has affected their traditional teaching roles. Therefore, this investigation sought to explore changes in traditional teaching roles experienced by on-line instructors and their satisfaction with such changes. The findings hold implications for those who recruit, hire, train, and supervise on-line instructors.

Related Literature

Educators, such as teachers and trainers, take on a number of roles in their classrooms. According to Webster (1990) a role is defined as a character assigned or assumed; a function. Various authors discuss their ideas of these functions or roles that instructors employ within the context of the traditional classroom setting. It has been suggested that traditional classrooms are based on an instructor paradigm (Torode, 1997; ERIC Digest, 1992), in which the instructor is a role model or example to which students aspire. Teachers and trainers play the role of expert, "the sage on the stage" (Young, 1997; Downe, 1997). In this role, the instructor displays skills or knowledge based on experience, education, or training. Instructors are also lecturers or presenters of this expert knowledge (Swift & Wilson, 1997; Young, 1997; Bauer, 1998; Harris, 1992), delivering the information gathered from research, reading, and experience. Traditionally, teachers play the role of authoritarian (Whitman, 1999) or disciplinarian (Meyen & Lian, 1997; Downe). Other roles include those of course designer (Harris; Young, 1997)

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and discussion moderator or questioner (Harris; Downe; Young). Traditional instructors are also evaluators or critics (Braxton-Brown & Keenan, 1991; Harris; Young) of a learner's work, deciding just how well students master the subject.

Through the growth and acceptance of technology, distance education has emerged and therefore reshapes the roles and functions played by educators. Distance education is defined as any learning that takes place without the physical presence of the instructor with the learner (Boles & Sunoo, 1997). Now, raising even more questions as to the roles and functions of instructors is the appearance of the Internet and World-Wide-Web as a new mode of distance teaching. Even though its use is not currently widespread, the Internet delivers training that is expected to increase dramatically (Bassi, 1997). Higher education and corporations are beginning to take advantage of the Internet as the newest form of distance education. Although there is a body of knowledge on distance education, on-line instruction was not an option when this literature was written. Until more research can be done on teaching on-line, distance education offers some direction as to the roles of these instructors and how they have changed from the traditional classroom. Therefore, it is useful to view on-line instruction as a distance education option. Most of the research on distance education has not looked directly at the effects it has on instructors and the roles they play. These studies do not classify roles of distance instructors; they do, however, make inferences based on students' needs and opinions.

Several authors have commented on the roles that distance instructors play and the ways in which they have changed from traditional teaching roles (Berge, 2000; Danney & Martha, 1999; McMann, 1994). Distance/on-line educating shifts the focus from the instructor being the "sage on the stage" to being the "guide on the side" (Young, 1997). Instructors are now helping the students to learn how to analyze information and have more control over their own learning. Trainers and teachers are no longer focusing on what they can teach but on playing the role of facilitator in the learning process (Swift &Wilson, 1997; Moore, 1997; Meyen & Lian, 1997; Doyle, 1991). Through distance/on-line teaching, instructors become mentors or counselors (Downe, 1997; Whitman, 1999; Torode, 1997; Simonson, 1993; Rangecroft, 1998; Care, 1995). Students frequently feel isolated from instructors and other students in on-line courses. Counseling these students motivates them to participate, and it promotes their confidence. Mentoring also reduces students' fear, and it reduces the sense of teacher as authoritarian, which allows the learner to be in control.

In addition to counselor, other key roles emerge from the growing need for students to do well and feel a part of the learning environment. The distance/on-line teacher must become a communicator (Meyen et al.; Thach, 1993, Simonson). In some distance education there is no nonverbal communication, no body language to read, and no face to face contact. This means that solid communication is imperative to the students' success. Emails and materials such as syllabi must be clear and effective. The instructor must personalize communication through email, phone, or fax. Instructors need to ensure lines of communication are always open. They also need to provide constant feedback. Teaching through distance education means more hours of preparing instruction and materials than in traditional classrooms. Instructors play a more emphasized role of instructional designer (Meyen et al.; Bauer, 1998; Kubala, 1998, Simonson; Swift et al.). Their work is done up front, and there is no room for "winging it." All materials and course preparation must be completed before the first class even begins. Instructors must decide what content to post, work with technicians and other professors to prepare multimedia presentations, and make sure that all lessons encourage student involvement and interaction.

The web continues the long debate between the Objectivist and Constructivist approach to teaching. Under the constructivist model, students are the active processors of information; they are self-directed in their learning. Students have their own questions, and through the use of the Internet, they are able to find their own answers and discover new information through exploration. The instructor plays the role of learning facilitator. The Objectivist model is based on learning objectives set by the instructor. This is a subject-centered approach with definite right and wrong answers. Teachers who use this approach highly manage their instruction. In this, their role is to control the learning environment. The Objectivists use the web for more specific learning activities, exercises, and quizzes. (Fox, no date; Koyanagi, no date).

There are mixed reviews as to distance educators' attitudes and satisfaction pertaining to changes in their teaching roles (Thach, 1993). Some instructors find teaching on-line to be a positive experience (Moore, 1997; Meyen & Lian, 1997). Some instructors see the need and opportunity for on-line teaching. They also see the Internet as a great opportunity for faculty who live in remote areas to have this kind of access. Some even believe that teaching may become more efficient and that these new roles will leave them with more time to do the things they do best (Young, 1997). Although there are those who are pleased with these changing roles and technologies, there is more literature on the frustration and lack of excitement towards these new roles. According to a survey done on the faculty of Florida Gulf Coast University, over half do not believe that more Internet classes should be offered nor do they see the Internet as an effective alternative to traditional instruction (McKinnon, 1998).

Trainers and professors alike worry that on-line learning may be stealing their control and ownership of their courses, and many worry that their jobs will become unstable and that they could be replaced (McKinnon). Teaching is now occurring at home or at an office, and some teachers find it challenging to balance flexibility with some form of a set schedule. Others are just frustrated and resistant to making the move to on-line learning due to role ambiguity (Ullrich, 1998). Instructors know their role is changing. But they do not know exactly how, and they are not being trained to take on such roles. Due to all these frustrations as well as the amount of time for preparation, many instructors feel inadequately prepared and inadequately compensated (Pool, 1996).

Research Questions

For the purpose of this study, three research questions were posed. They included:

1. Are there significant differences in on-line instructors' perceived changes in traditional teaching roles?
2. Is there a significant difference in on-line instructors' satisfaction with on-site versus on-line teaching experiences?
3. What new roles do on-line instructors assume when teaching on-line?

Methodology:

The World-Wide-Web was the sole source of respondents for this survey. Initially, a general search for On-Line Courses was performed using search engines such as Yahoo, MetaCrawler, etc. This resulted in many direct links to courses, as well as directory sites, such as The World Lecture Hall (http://www.utexas.edu/world/lecture) and The Distance Learning Resource Network (http://www.wested.org/tie/dlrn/CollegeDistanceEd.html). Once specific courses and instructors were found, additional on-line courses taught at the same institution were added to the sample pool. A total of 565 cover letters and surveys were e-mailed to on-line instructors. The survey was included in the text of the e-mail message and also attached as a Word document. Respondents were given instructions on how to return the questionnaire. Options included e-mail, fax, or the U.S. postal service. Fax and U.S. mail return options were offered to respondents desiring complete anonymity. One hundred forty-four (144) usuable surveys were returned (25.48% response rate). Some instructors who e-mailed back comments stating that they did not have the time to complete the 65-item questionnaire. Items on the questionnaire related to personal/occupational information, satisfaction with instructor roles, and perceived changes in teaching roles.

Data from the questionnaires was entered into a statistical database from which descriptive and comparative statistics were generated. Descriptive statistics included frequency counts, percentages, and means scores for the selected variables. Comparative statistics included the results of *Chi Square* tests and an *Independent T Test*. The probability level for determining statistical significance was $p = .05$.

Results

Respondents had a mean age of 52.44 years. Forty-nine (34%) were female and 95 (66%) were male. On average they had taught for 18.92 (SD=10.8) years and on-line for 2.23 (SD=4.31) years. Their main reasons for teaching on-line were to reach more students (38.2%), personal interest/challenge (20.1%), required to (12.5%), job flexibility (8.3%), professional development (6.9%), and to keep up with technology (6.3%). They had received an average of 15.06 (SD=32.51) hours of training on teaching on-line.

The Chi Square Test used to answer question one ((i.e., Are there significant differences in on-line instructors' perceived changes in traditional teaching roles?) reveal several differences (see Tables One-Six). Seven traditional teaching roles showed significant differences with respect to time consumption and challenge, five with respect to role importance, four with respect to role changeability, and three in terms of role satisfaction. The role displaying the greatest number of significant differences was that of Instructional Designer (5 significant differences). With four differences, Evaluator and Role Model had the next highest number of significant differences. Only one significant difference was discerned with respect to the role Information Presenter.

The *Two-Tailed Independent T Test* used to test for a significant difference in on-line instructors' satisfaction with on-site versus on-line teaching experiences (question two) revealed no significant difference ($t=1.89$, $df=143$, $p=.06$). On a five-point likert-type scale, respondents' means score for satisfaction with their overall classroom teaching experiences was 4.72 (SD=4.24) and their on-line teaching experiences was 4.05 (SD=.95).

As for question three, (i.e., What new roles do on-line instructors assume when teaching on-line?) only one new role was identified by a large number of respondents. Forty-seven of the respondents named computer

technology consultant as a new role they had taken on as on-line instructors. They reported that students turned to them for technology assistance.

Table 1. Role Changes With Respect To Time Requirements (n=144)

Roles	Less Time Consuming	Equally Time Consuming	More Time Consuming	Chi Square Value	P Value
Authoritarian	32.6%	34.7%	29.9%	26.32	.00
Counselor	20.8%	25.7%	50.7%	.0111	.99
Discussion Monitor	13.9%	18.1%	66%	13.30	.00
Evaluator	07.6%	35.4%	55.6%	17.62	.00
Subject Matter Expert	16%%	50%	32.6%	42.88	.00
Information Presenter	25.7%	20.8%	51.4%	3.00	.22
Instructional Designer	02.1%	10.4%	85.4%	71.49	.00
Mentor	29.9%	26.4%	35.4%	12.47	.00
Role Model	31.9%	33.3%	31.9%	21.61	.00

Table 2. Role Changes With Respect Role Importance n=144

Roles	Role Less Important	Role Equally Important	Role More Important	Chi Square Value	P Value
Authoritarian	36.8%	46.5%	15.3%	32.97	.00
Counselor	17.4%	47.9%	33.3%	5.14	.08
Discussion Monitor	9%	38.9%	50.7%	50.90	.00
Evaluator	1.4%	58.3%	37.5%	32.37	.00
Subject Matter Expert	10.4%	64.6%	22.9%	7.19	.03
Information Presenter	15.3%	50%	31.3%	3.57	.17
Instructional Designer	25.7%	70.8%	.7%	45.56	.00
Mentor	20.1%	50.7%	22.2%	.71	.7
Role Model	24.3%	50%	20.8%	4.16	.13

Table 3. Role Changes With Respect Role Challenge n=144

Roles	Role Less Challenging	Role Equally Challenging	Role More Challenging	Chi Square Value	P Value
Authoritarian	16%	50.7%	31.3%	2.58	.28
Counselor	12.5%	46.5%	36.1	.01	1.00
Discussion Monitor	6.9%	31.3%	59%	30.13	.00
Evaluator	1.4%	52.8%	44.4%	18.49	.00
Subject Matter Expert	7.6%	59%	31.3%	10.2	.01
Information Presenter	9.7%	31.9%	55.6%	21.06	.00
Instructional Designer	22.9%	0%	73.6%	85.86	.00
Mentor	19.4%	45.1%	27.1%	7.39	.03
Role Model	22.2%	40.3%	34.7%	9.71	.01

Conclusions

Several conclusions may be drawn from the results of this exploratory study. It appears that some on-line instructors perceive many changes in the traditional roles that they perform in face-to-face instruction. The major changes appear to be related to time requirement and challenges associated with performing traditional teaching roles. For example, 85.4% of the respondents found the role of Instructional Designer more time consuming with on-line teaching. Sixty-six percent (66%) found the role Discussion Monitor and 55% found the role Evaluator more time consuming. Approximately seventy-four percent (73.6%) of the respondents found the role Instructional Designer

more challenging. Fifty-nine percent (59%) found the role of Discussion Monitor and 55% found the role Information Presenter more challenging. Other notable changes in roles occurred with respect to role importance and changeability. For example, 50% of the respondents perceived the role of Discussion Monitor as being more important and 46.5% of the respondents view the role of Instructional Designer as being more changeable (i.e., more dynamic or fluid).

Table 4. Role Changes With Respect Daily Changes In Performance of Role n=144

Roles	Role Less Changeable	Role Equally Changeable	Role More Changeable	Chi Square Value	P Value
Authoritarian	16%	47.9%	28.5%	.58	.75
Counselor	14.6	57.6%	19.4%	5.88	.05
Discussion Monitor	9.7%	47.2%	36.1%	4.83	.09
Evaluator	13.9%	52.8%	27.1%	.27	.87
Subject Matter Expert	11.1%	54.9%	26.4%	1.61	.45
Information Presenter	13.2%	48.6%	29.9%	.31	.86
Instructional Designer	3.5%	41.7%	46.5%	30.29	.00
Mentor	18.8%	51.4%	16%	10.7	.01
Role Model	24.3%	51.4%	14.6%	20.81	.00

Table 5. Role Changes With Respect Role Satisfaction n=144

Roles	Role Less Satisfying	Role Equally Satisfying	Role More Satisfying	Chi Square Value	P Value
Authoritarian	16.7%	61.8%	14.6%	1.34	.51
Counselor	20.8%	58.3%	16.7%	.04	.98
Discussion Monitor	21.5%	56.3%	20.8%	1.93	.38
Evaluator	12.5%	70.1%	15.3%	6.09	.05
Subject Matter Expert	13.2%	68.8%	16%	5.73	.06
Information Presenter	20.1%	55.6%	22.2%	3.26	.2
Instructional Designer	4.9%	56.9%	35.4%	48.63	.00
Mentor	25%	54.2%	13.9%	2.58	.28
Role Model	28.5%	59%	9%	9.22	.01

Another conclusion derived from the study is that some on-line instructors are not generally significantly more or less satisfied with their on-line teaching experiences than they are with their "regular" on-site teaching. However, an inspection of perceived satisfaction changes with respect to specific roles, revealed that 35.4% of the respondents experienced increased satisfaction with the role of Instructional Designer. This is the same role that 85.4% of the respondents found more time consuming and 73.6 found more challenging. It would appear that a large number of the instructors took on the challenge of designing instruction for the web and found it more satisfying than their on-site instructional design efforts. The roles of Role Model and Mentor had the greatest number of instructors (28.5% and 25% respectively) indicating they viewed their on-line performance of the roles as being "less satisfying."

Finally, it appears that many on-line instructors performed the same roles in their on-line instruction as they do in their face-to-face teaching. When asked to identify the new roles they had taken on as on-line instructors, only one new role reported-technology consultant. Comments from respondents suggested that the on-line instructors were using new "methods" to perform traditional teaching roles and that their on-line students looked to them for assistance with computer technology.

Discussion

The results of this investigation tend to support the findings of other writers. For example, the finding that seven traditional teaching roles showed significant differences with respect to time consumption and challenge corresponds with the research of Ullrich (1998) and Pool (1996). Furthermore, the finding that the role of Instructional Designer undertook the greatest number of significant changes is consistent with the findings by several researchers (Meyen et al.; Bauer, 1998; Kubala, 1998, Simonson; Swift et al.) who speak of the more emphasized role of instructional designer among on-line instructors. The small amount of training instructors received in preparation for teaching on-line is also consistent with comments from Pool (1996). Nevertheless, additional research into the methods being used by instructors to perform traditional roles is needed. Some of the methods changes appear to be overt and were hinted at in respondents' comments. Other more subtle changes were not touched upon by the results of this study.

The results of this study hold implications for those who recruit, hire, train, and supervise on-line instructors. For example, some of the instructor's reasons for teaching courses on-line might be mentioned by recruiters as potential benefits (i.e.., reach more students, personal interest/challenge, job flexibility, professional development, and keep up with technology) to prospective instructors. Given the fact that on-line instruction heavily relies on instructor written communication and technology skills (Meyen et al.; Thach, 1993, Simonson), it is important that recruiters screen potential hires in terms of their expertise in these areas. Respondents in the study indicated that many of their traditional roles became more challenging due to the need to be more "guiding," "directing," and "explicit" in their communications with students. Instructors also indicated that many of the roles were made more challenging by the technology.

The results that respondents in the study only received 15.06 hours of training in preparation to teach on-line suggest that on-line instructors are not being adequately prepared for their new on-line teaching assignments. It is likely that additional training is needed and that some of the additional training might be well spent on the design of web-based courses and materials. Additional training should also be given in preparing instructors to perform the role of "technology consultant." The additional time required to prepare (i.e., design) on-line courses and materials should be taken into consideration by supervisors in terms of teaching loads (i.e., the number of courses an instructor is required to teach) and/or compensation. Furthermore, evaluation instruments used by students to evaluate on-line instructors may need to be revised to include new teaching methods and strategies being used to perform traditional teaching roles as well new emerging roles.

References

Bassi, L., & Cheney, S. (1997). Training industry trends 1997. Training & Development, 51, 46-58.

Bauer, A. (1998). World wide weeds. Training, 35, 12.

Berge, Z. L. (2000k). The role of the online instructor/facilitator. Available at eModorators.com http://www.emoderators.com/moderators/teach_online.html

Boles, M., & Sunoo, B. P. (1997). Distance learning challenges trainers. Workforce, 76, 21.

Care, W. (1995). Helping students to persist in a distance education program: The role of the teacher. Paper presented to the Faculty of Nursing, University of Manitoba. (ERIC Document Reproduction Service No. ED 389855).

Danney U., & Martha M. (1999). Wearing many hats: The roles of an online instructor. Available at http://www.stedwards.edu/it_dept/instcom/roles.html

Downe, R. (1997). A study in stand-up: The roles trainers play. Business Journal Serving Southern Tier, CNY, Mohawk Valley, Finger Lakes, North, 11, 15.

Doyle, J. (1991). Innovations in training. *Credit*, 17, 10.

Fox, T. (No Date). Delivering instruction on the world wide web. Available: http://www.csuhayward.edu/ics/htmls/Inst.html#Cognitive

Galusha, J. (1998). Principles of training and of adult education: A comparison. (ERIC Document Reproduction Service No. ED 416378).

Gandz, J. (1997). The death of teaching: The rebirth of education. Ivey Business Quarterly, 62, 11-13.

Green, K. C. (1996). The coming ubiquity of information technology. Available at http://trc.ucdavis.edu/Distance-ed/Babey-Green.htm.

Harris, D. (1992). Learners' and instructors' roles in the learning environment. Proceedings of selected research and development presentations at the convention of the association for educational communications and technology. (ERIC Document Reproduction Service No. ED 347993).

Instructional conversations. ERIC digest. (1992). (Report No. EDO-FL-92-01). Washington, DC: National Center for Research on Cultural Diversity and Second Language Learning. (ERIC Document Reproduction Service No. ED 347850).

Johnson, S., Aragon, S., Palma-Rivas, N., Shaik, N., & Bilsbury, N. (1999). Comparative analysis of online vs.face-to-face instruction. In K. P. Kuchinke (Ed.), Academy of Human Resource Development 1999 Conference Proceedings, (pp. 68-76). Baton Rouge, LA: AHRD.

Keenan, T. P., & Braxton-Brown, G. (1991). Techniques: Coach, consultant, critic, counselor: The multiple roles of the responsive facilitator. Journal of Adult Education, 19 (2) insert.

Khirallah, D. R. (2000).Veterans agency turns to online training. InformationWeek, 3779, 183.

Klesius, J. P., & Homan, S. (1997). Distance education compared to traditional instruction: The students' view. International Journal of Instructional Media, 24, 207-220.

Koyanagi, M. (No Date). Putting courses online: Theory and practice. Available: http://ils.unc.edu/disted/cmi/final2.html.

Kubala, T. (1998). Addressing student needs: Teaching on the internet. T H E Journal, 25, 71-74.

McKinnon, J. (1998). Faculty diss distance education. Community College Week, 11, 30.

McMann, G. W. (1994). The changing role of moderation in computer mediated conferencing. In the Proceedings of the Distance Learning Research Conference. San Antonio, TX April 27-29, pp. 159-166.

Meyen, E., & Lian, C. (1997). Teaching online courses. Focus on autism & other developmental disabilities. Disabilities, 12, 166-174.

Moore, S. (1997). The role of the teacher in distance education: The teacher perspective. Proceedings of the Annual International Conference of the Chair Academy. (ERIC Document Reproduction Service No. ED 407022).

Pool, P. (1996). Teaching via interactive television: An examination of teaching effectiveness and student satisfaction. Journal of Education for Business, 72, 78-81.

Pritchard, C. (1998). From classroom to chat room. Training & Development, 52, 76-77.

Rangecroft, M. (1998). Interpersonal communication in distance education. Journal of Education for Teaching, 24, 75-76.

Russell, T. L. (1997). The "no significant difference" phenomenon. Available at http://www2.ncsu.edu/oit/nsdsplit.htm.

Rutherford, L. H. (1997, March). Retrofitting academe: Adapting faculty attitudes and practices to technology. T.H.E. Journal. Available at http://www.thejournal.com/past/sep/59ruther.html

Scanlon, Bill. (1999). Online courses increasingly popular. Available at http://www.insidedenver.com

Simonson, M. R. (1993). Encyclopedia of distance education research in Iowa. Iowa Distance Education Alliance, Ames. (ERIC Document Reproduction Service No. ED 388314).

Swanson, S., & Khirallah, D. R. (2000). Online training helps metlife develop, keep it staf. Information Week, 799, 119.

Swift, C. & Wilson, J. (1997). Interactive distance education in business: Is the new technology right for you? Journal of Education for Business, 73, 85-89.

Thach, L. (1993). Exploring the role of the deliverer in distance education. International Journal of Instructional Media, 20, 289-308.

Torode, C. (1997). Computerprep charts course for future. Computer Reseller News, 749, 109-110.

Ullrich, M. (1998). Making the move to online learning. WebNet 98 World Conference of the WWW, Internet and Intranet Proceedings. (ERIC Document Reproduction Service No. ED 427741).

Ward, E., & Lee, J. (1995). An instructor's guide to distance learning. Training & Development, 49, 40-45.

Whitman, A. (1999). Mentoring the distance learner. Community College Week, 11, 21-23.

Young, J. R. (1997). Rethinking the role of the professor in an age of high-tech tools. The Chronicle of Higher Education, 44, a26-a28.

Wilson, S. W. (2000). Towards a framework for teaching and learning in an online environment: a review of the literature. In K. P. Kuchinke (Ed.), Academy of Human Resource Development 2000 Conference Proceedings (pp. 68-76). Baton Rouge, LA: AHRD.

Yudkowsky, C. (1998). How to implement distance learning in workplace. Business Journal: Serving Greater Tampa Bay, 18, 40.

Factors Affecting Student Completion in a Distance Learning Mediated HRD Baccalaureate Program

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This study analyzed factors affecting degree completion of the nontraditional adult students in a distance learning mediated, degree-completion HRD program. Demographics, number of technical and general education hours transferred, work-related and family-related variables were examined to determine those factors most likely to predict program completion.

Keywords: Distance Learning, Working Adults, HRD Baccalaureate Degree

Many American businesses have restructured to meet the demands of a global economy in order to compete with businesses in other countries. Because of that, American workers face a new challenge in having to upgrade continually their knowledge and skills, or in learning new skills in order to remain competitive and increase their earning power (Dubois, 1996). These demands require the American workforce to be more educated to function in a global community. For this reason, more and more working adults (nontraditional students) seek higher educational opportunities for upgrading the skills and knowledge needed in business today. The absence of an earned bachelor's degree limits opportunities for working adults to graduate education and access to higher positions and career advancement (Chu, Martinez, & Hinton, 1999).

Theoretical Framework

The growth of nontraditional students enrolling in higher education reflects the changing demographics of university and college student populations. Over one third of the students now enrolled in U. S. colleges are more than 35 years old. Between 1983 and 1993, enrollment increased about 15 percent, from 12.5 million to 14.3 million. Much of this growth was in part-time and female enrollment. The number of older students has been growing more rapidly than the number of younger students. Between 1980 and 1990, the enrollment of students under age 25 increased by 3 percent while the enrollment of persons 25 and over rose by 34 percent. From 1990 to 2000, National Center for Education Statistics (NCES) projects a rise of 12 percent in enrollments of persons over 25 and an increase of 13 percent in the number under 25. Nontraditional students can be defined as having multiple roles such as parent, employee, student and so on. Nontraditional students are also defined as being over twenty-four years of age or returning to school after a break in their education (Hirschorn, 1988). They are often married, work, and have children, so returning to school means making a significant change in their life style.

The growth of nontraditional adult student enrollment in higher education demands a different and more flexible delivery system in order to meet the students' need. Distance education is one method that higher education institutions are turning to help meet the special needs of the nontraditional adult student. Distance education is any instructional activity in which the instructor and the learner are separated by space or time (Keegan, 1986). It also provides powerful tools for locating, synthesizing, and creating resources in digital schools without walls to both instructors and learners (Ludlow & Duff, 1998). It is seen as a promising mechanism for improving access to education by increasing the size of service areas (Jacobsen, 1994). It reaches nontraditional learners who cannot afford the time and expense (Ehrmann, 1990). It also enhances the quality of education through multimedia and interactive instruction. In addition, it controls costs by increasing enrollments without additional capital investments (Blumenstyk, 1994).

Distance learning is compatible with the characteristics and needs of the adult learner. By being able to maintain their current job while attending school, nontraditional adult distance learners are able to continue to gain

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in work experience while simultaneously pursuing educational goals. Continued work experience enriches the learning process for the individual. The individual's experiential contribution can also enhance the learning process for the other students as well.

While the literature speaks extensively to the characteristics and needs of adult learners, there is a need for research on the impact of distance learning on adult student degree completion. What, if any, is the impact of the demographics of adult learners, work-related variables, and family, or employer support on the graduation rates of these students? Does access to a degree completion program insure student success? It was these questions that sparked this study.

Research Questions

The key question in the study was the following: What are the factors affecting degree completion of nontraditional students in a distance learning mediated, HRD bachelor degree-completion program? This study was guided by research questions that asked, Is there a difference between students who have graduated or are on-track to graduate and those who are not graduating in terms of the *number of credit hours of general education and the number of credit hours of technical requirements* earned prior to program entry, *selected demographic factors, selected work-related factors, family-support factors, and employer-support factors?* The study also sought to determine what *combination of factors* best predicts student graduation?

Methodology

The population of the study was all adult (nontraditional) learners in a distance learning B.S. Ed. HRD degree completion program option. There were three cohorts distributed in ten different sites. The total population of students was 111 with the sample being the 106 students responding to the survey. Cohort one and cohort two, which were launched in 1996 and 1997, have finished their academic work in the HRD distance-learning program. Cohort three, which was launched in 1998, was scheduled to finish their course work with the HRD degree completion program in Spring 2000. The sample was divided into two groups: (a) students who have graduated or were on-track to graduate within four years and (b) students who are not graduating.

The Survey Instrument

A survey questionnaire, HRD Student Enrollment Survey, was used to collect data to answer the research questions in the present study. A five-point Likert-type scale was adopted for the attitudes that the respondents possessed toward family support and employer support. The survey had three sections. The first section elicited personal information such as name, address, site, cohort, age, gender, ethnicity, prior credit hours gained, and associate degree completion status. The second section gathered information about work experience including number of years of work experience, type of work, and kind of organization. The third section contained questions about family support and employer support. Family support included verbal encouragement, financial support, child care assistance, help with responsibilities at home, and transportation. Employer support included verbal encouragement, tuition reimbursement, and time off from work to attend classes.

Data Analysis

A series of descriptive analyses was conducted before an inferential statistical test for each research question. Descriptive statistics reported frequencies (n) and percentages (%) of respondents who have graduated or are on-track to graduate and those who are not graduating based on demographic data, work-related data, and the sub-items of family support and employer support collected from the survey.

Inferential statistical tests (t-test, Chi-square, and Logistic Regression) were performed to test the seven research questions. To compare if there was a difference between two group means, a t-test was used. Pearson's chi-square was used to determine if there was a difference between two group percentages. The significance level (α-level) for accepting or rejecting all hypotheses was set at .05 (Wiersma, 1991). Logistic regression analysis, which was conducted to determine if the selected variables in combination could predict whether students graduate or not.

Findings

The following is summary of both descriptive data and inferential statistical findings:

Demographics

The majority of the participants were female, who consisted of 68.9 percent of the total respondents, while the male participants consisted of 31.1 percent. The majority (72.6%) of the participants in this program was between the ages of 31 - 50. The two largest groups in this study were 31-40 years (36.8%) and 41-50 years old (35.8%). Of the 106 respondents, 77 fell into these two categories. Only fourteen (13.2%) of the respondents were younger than 30 years old. Twelve (11.3%) of the respondents were between 51 - 60 years old. There were no students younger than 22 or older than 61. The majority of the respondents were White (86%). Thirteen (12.3%) of the respondents were black. Other ethnicity groups included one American Indian, one Asian, and one Hispanic student. The majority of the respondents (83%) lived within 25 miles of the class location. The largest group (61.3%) lived within 10 miles from the classroom while only eight respondents (7.5%) needed to drive more than 50 miles to attend the classes. A majority (54.7%) of the students entered this degree completion program with an associate degree. The majority of the respondents (79%) had between 11 - 30 years of work experience. The largest group (31.1%) had between 21 - 30 years of work experience. Forty-five (42.5%) of the respondents described their work as being in management, and 16 (15.1%) of the respondents described their work as supervisory. Forty-three (40.6%) described their positions as being non-supervisory in nature. The results show that the largest percentage of the respondents (33%) worked in an educational setting. The second largest type of organization was manufacturing (21%) followed by health (12.3%), government agency and service industry (10%), and transportation (7%). The remaining students fell into the category of others.

A majority of the respondents (62.3%) worked in their present jobs for 5 years or less. Eighty-two percent of the respondents worked in their present jobs for 10 years or less. The largest group (38.7%) of the respondents worked in their present jobs within 2-5 years. The second largest group (23.6%) worked in their present jobs for less than one year. The third largest group (19.8%) worked in their present jobs within 6 - 10 years. Those who worked in their jobs for more than 10 years comprised only 17.3% of the respondents with 7% having worked between 11-15 years and 5.7% more than fifteen years. This item also showed only one respondent working on the present job for more than 21 years.

The largest group of the respondents (39.6%) worked for medium sized companies and organizations with 100 to 500 employees. The second largest group (20.8%) fell into the first category, which was organizations with less than 50 employees, followed by 501 to 1000 employees (11.3%), 10001 and above employees (9.4%), 1001 to 5000 employees (8.5%), below 100 employees (5.7%), and 5001 to 10000 employees (1.9%).

In summary, by using modes as a guideline, a typical survey participant is described generally as follows: A 31 to 40 year-old white female, who has earned an associate degree with 18 general credit hours and 33 technical credit hours brought into the program. She works in an educational organization with 100 to 500 employees. She has worked in the present management position for 2 to 5 years.

Analysis of Previous Hours Taken, Demographics, Work-Related, Family Support and Employer Support Factors

Results of the analyses indicated that there is a significant difference between students who have graduated or are on-track to graduate and those who are not graduating in terms of the *number of credit hours of general education* requirements earned prior to program entry, (4.066 with a probability of .000); *number of technical credit hours* earned prior to program entry, (t-value of 2.932 with a probability .004), in terms of an *associate degree earned* prior to program entry (X^2 value was 3.958 with a p-value of .047) and in terms of family support (t-value of t 2.083 with a p-value of .040). Individual factors which were not found to be significant included: *gender, age, ethnicity, distance to attend classes, type of work, type of organization, total number of years of work experience, number of years in present jobs, number of employees in the organization, and employer support.*

The study sought to determine in *combination* what demographic variables, work-related variables, general and technical credit hours earned prior to program entry, and family and employer support best predicts students' graduation. Logistic regression was conducted to estimate how well the selected variables could predict graduation to occur. The purpose of the logistic regression analysis was to predict the probability of graduation by using all the variables. The variables included: (a) gender, (b) age, (c) ethnicity, (d) the number of general credit hours earned prior to the program entry, (e) the number of technical credit hours earned prior to the program entry, (f) an associate degree earned prior to the program entry, (g) the number of years of work experience, (h) the type of work,

(i) the type of organization, (j) the number of years in present job, (k) the number of employees in the organization, (l) family support, (m) employer support, and (n) the distance to attend classes.

In logistic regression analysis, the greater the Wald value, the greater the probability is of an event to occur. The number of the general credit hours earned prior to program entry (Wald value = 11.0380 with a significance of .0009) played an important role in the graduation of the respondents. From Table 1, a direct estimation of the probability of an event occurring can be made by computing the B (effect coefficient), X (the independent variable), and e (the base of the natural logarithms, approximately 2.718) using the formula: Prob (event) = $1/(1+e^{-Z})$, where $Z = B_0 + B_1X_1 + B_2X_2 + B_3X_3 + \ldots$ The probability of the event not occurring is estimated as Prob (no event) = 1- Prob (event). Based on this estimate, predictions of the probability to graduate can be made. The event is predicted to not occur if the estimated probability of the event is less than 0.5. The event is predicted to occur if the estimated probability of the event is greater than 0.5 (Table 1).

The number of technical credit hours earned prior to the program entry was significantly related to the graduation with the Wald value 4.0591 and a significance of .0439; the number of general studies hours previously completed had a Wald value 11.0380 and a significance of .0009. Employer support was also significantly related to the graduation with the Wald value of 4.9612 with a significance of .0259. One can conclude that the combination of these three variables best predicts student graduation.

The results seemed contradictory with the t-test results of employer supportive individually (significance level of .175), which showed no significant difference on students' graduation. Thus, some variables might not make a significant difference when they are tested alone, but they become significant when they are combined with other variables. One can conclude that when general credit hours earned prior to program entry, technical credit hours earned prior to program entry, and employer support were *combined*, there is a significant difference made in student graduation in terms of the combination of these three variables.

Table 1. Parameter Estimates for the Logistic Regression Model (1)

Variables in the Equation					
Variable	B	S. E.	Wald	Sig	R
GENDER	-.6150	.7122	.7457	.3878	.0000
AGE	-.4543	.5448	.6952	.4044	.0000
ETHNIC	-.5221	1.0549	.2450	.6206	.0000
CREDGEN	.1083	.0326	11.0380	.0009	.2635
CREDTECH	.0668	.0331	4.0591	.0439	.1258
AADEGREE	-1.0759	.8209	1.7179	.1900	.0000
YRWORK	.5252	.4093	1.6462	.1995	.0000
TYPEWORK	.1562	.4904	.1014	.7501	.0000
TYPEORG	.3618	.2136	2.8700	.0902	.0801
YRPREJOB	-.1451	.2429	.3571	.5501	.0000
NUMPEOPL	-.1888	.1849	1.0425	.3072	.0000
FAMISUP	.2447	.3711	.4349	.5096	.0000
VERBAL	-.3141	.8936	.1236	.7252	.0000
FINANCE	.4847	.7703	.3958	.5292	.0000
CHILDCARE	-.4781	.9063	2.6602	.1029	-.0712
HELPHOME	-.4393	.7335	.3587	.5492	.0000
TRANSPORT	.9106	.7988	1.2997	.2543	.0000
EMPOSUP	1.0933	.4908	4.9612	.0259	.1508
VERBALEM	.6078	.8399	.5237	.4693	.0000
TUITION	-.1048	.7282	.0207	.8855	.0000
TIMEOFF	1.4768	.8302	3.1642	.0753	.0946
DISTANCE	.4355	.3128	1.9388	.1638	.0000

$p < .05$

Another way to assess how well the logistic regression model fits is to compare the predictions to the observed outcomes (Figure 1). From the table in Figure 1, 38 respondents who are not graduating were correctly predicted by the model. Similarly, 32 respondents who have graduated were correctly predicted. A total of 23 respondents were misclassified in this model – 11 respondents are not graduating and 13 respondents have

graduated. With the respondents who have graduated, 71.11% were correctly classified. Of the respondents who are not graduating, 77.55% were correctly classified. Overall, 74.47% of the 94 respondents were correctly classified.

Figure 1. The Classification Table for Graduation through Goodness of Fit with All Variables

The Cut Value is .50		Predicted		
		Not Graduate	Graduated	Percent Correct
Observed		n	g	
Not Graduated	n	38	11	77.55%
Graduated	g	13	32	71.11%
				Overall 74.47%

Since the results showed that general credit hours, technical credit hours earned prior to program entry, and employer support were the best combination for predicting student graduation, another logistic regression was tested based on these three items only. The results (Table 2) showed that all the three variables were significant. The Wald of general credit hours was 13.77 with a significance of .0002. Technical credit hours had a Wald of 8.67 with a significance of .0032. Employer support had a Wald of 4.51 with a significance of .0337. The results gave a confirmation that these three variables were the best combination for prediction of student graduation.

Table 2. Parameter Estimates for the Logistic Regression Model (2)

----------Variables in the Equation ----------

Variable	B	S. E.	Wald	Sig	R
CREDGEN	.0770	.0208	13.7777	.0002	.2833
CREDTECH	.0711	.0241	8.6718	.0032	.2132
EMPLOSUP	.4241	.1997	4.5103	.0337	.1308

Goodness of fit test results (Figure 2) showed that with these three variables, 38 non-graduates were correctly predicted. Similarly, thirty-eight graduates were also correctly predicted. A total of 30 respondents were misclassified in this model 17 respondents are not graduating and 13 respondents have graduated or are on-track to graduate. With the respondents who have graduated, 74.51% were correctly classified. Of the respondents who are not graduating, 69.09% were correctly classified. Overall, 71.70% of the 106 respondents were correctly classified. This model predicted students who have graduated better than the previous model with all the factors (74.51% vs. 71.11%). The overall prediction rate was also higher than the previous model, which was 71.70% out of 106 respondents compared to 74.47% out of 96 respondents. This means that 76 respondents were correctly classified in this model compared to 71 respondents that were correctly classified in the previous model.

Figure 2. The Classification Table for Graduation through Goodness of Fit with Three Variables

The Cut Value is .50		Predicted		
		Not Graduated	Graduated	Percent Correct
Observed		n	g	
Not Graduate	n	38	17	69.09%
Graduated	g	13	38	74.51%
				Overall 71.70%

Discussion

The following discussion is limited to those factors found to be associated with program completion. Factors not found to be associated with graduation are not discussed because of space constraints.

General Education Credit Hours

The study revealed that the number of general credit hours earned prior to program entry did affect the degree completion between those who have graduated or are on-track to graduate and those who are not graduating. According to the t-test, respondents who earned more general credit hours prior to program entry were more likely to complete their degrees on time. There is no direct literature that supports that the more general credit hours students earned prior to program entry, the more likely they are to graduate. However, literature support the idea that continuous enrollment plays a big role in degree completion (Adelman, 1999). It can be assumed that if students keep enrolling in school, they continue to gain in the number of credit hours earned.

Technical Credit Hours

The study also revealed that the number of technical credit hours earned prior to program entry differed significantly between students who have graduated or are on-track to graduate and those who are not graduating. According to the t-test results, the findings indicated that the more technical credit hours the students earned prior to program entry, the more likely they were to graduate on time. Graduates had significantly more technical credit hours earned prior to program entry.

Again, there is no direct literature related to the relationship between technical credit hours earned prior to program entry with student graduation. One can assume that if the students keep enrolling in school, the more technical credit hours they would have earned. With more technical credit hours earned prior to program entry by the students, the more likely they are to graduate on time.

Family Support

It is not surprising that family support played an important role on degree completion of the participants. Since this distance HRD degree completion program offered classes five hours on Friday evenings and five hours on Saturday mornings, students had to take time from their family or from other responsibilities at home. In addition, homework and assignments also took away from their family. Family factors are personal because they are unique to every individual. It has been confirmed that non-completion in adult students is normally due to personal or financial factors rather than to academic failure (Lucas & Ward, 1985). The test results showed that family support was one of the factors that affected the degree completion of the respondents. One can conclude that graduates had more family support than did non-graduates. However, there is a need for further analysis of family support factors.

Employer Support

There is one factor – employer support – that surprisingly did not affect students on their degree completion when it was tested individually. From one of the previous studies on employer support and academic success by Dinmore (1997), employer support is one of the most powerful motivators for re-entry adult students, particularly if the employers offer their full tuition reimbursement. It seems surprising that the test results did not indicate that employer support was one of the factors affecting degree completion of the respondents, since employer support has been confirmed by the literature as one of the important factors affecting academic success of working adult students. Even though employer support was not significant when it was tested individually, it was significant when it was combined with the other two.

From the test results, the researcher found the factors affecting academic success (degree completion) were highly individualized. Demographic factors such as gender, race, and age seemed to have no effect on student's degree completion. Since they were working adults, the researcher took working conditions into account as factors such as the number of years of work experience, the type of work, company size, and the type of organizations where they worked. The results showed that those variables did not affect degree completion. What affected degree completion were factors that related to individual students such as the number of general credit hours and technical credit hours they earned prior to program entry, whether they entered the program with or without an associate degree, and whether or not they received family support.

However, employer support was found significant as tested by logistic regression analysis. It was a significant factor affecting student graduation when combined with two other factors – general credit hours earned prior to program entry and technical credit hours earned prior to program entry. Logistic regression was conducted to estimate how well the selected variables could predict graduation to occur. The test results showed that the best

model to predict student graduation was the combination of these three variables, which were general credit hours earned prior to program entry, technical credit hours earned prior to program entry, and employer support. The test results were consistent with the literature that employer support is one of the important factors for working adult students pursuing their educational goals. According to the discussions above, one can conclude that general and technical credit hours earned prior to program entry, an associate degree earned prior to program entry, family support, and employer support were the factors affecting degree completion of the nontraditional students in an HRD degree completion program in distance learning.

How This Research Contributes to New Knowledge in HRD

This study suggests factors that affect the degree completion of nontraditional adult learners in distance education, particularly in the field of Human Resource Development. The findings of this study may help program planners and curriculum developers design support programs and academic enhancement activities that will help students achieve academic success. An important implication for this research is the potential use of the findings to improve students' graduation completion rates. The study also raises some issues that should be investigated further. Several implications and recommendations can be made based upon the study.

Future studies should focus in more detail on family support to see how it affects student graduation rates. Based on the single-factor Likert scale in this study, family support is an important factor for students to graduate on time. Although there were subcategories related to family support, these subcategories did not indicate the degree of importance each had in the overall rating of family support. The respondents were asked to check a subcategory if they had support in this area. However, while one can conclude that any respondent who marked this subcategory had such support, what is missing is the ability to make inferences about those who did not mark a subcategory. One cannot conclude whether they lacked support in this area or whether it was simply not a necessity or concern. For instance, in the area of child care the respondents were not asked if they had any children, or if they had children whether child care was a necessity. The same can be said for financial support or any of the other categories. A more detailed questionnaire or a more comprehensive Likert scale that requires answers from all respondents could then allow for a comparison to be made between students who have graduated and those who are not graduating to see whether the two groups differ significantly or not.

Employer support is also an important factor for students to continuously pursue their educational goals. In the present study, employer support did not make any difference between students who have graduated or are on-track to graduate and those who are not graduating when it was tested individually. The descriptive statistics indicated that the majority of the respondents received rather high support from their employers. Does it imply that employer support might be very encouraging for employees taking classes in their related field, but it might not be the factor enhancing employees to complete degrees? However, the test results of logistic regression analysis pointed out that employer support was a factor affecting student graduation while combined with the other two factors – general credit hours earned prior to program entry, and technical credit hours earned prior to program entry. It became significant when it was tested in the combination with the other two factors. Further studies should focus on the relationship between employer support and student academic success (degree completion) in detail.

Distance education has been considered an adopted child in higher education. Students take courses by distance education because of its convenience and the accessibility. Literature found that there is no difference between distance learners and traditional students on performance, but research studies related to student satisfaction in distance learning seldom can be found. Future studies should also focus on student satisfaction between distance learners and the defined distance learners described in the literature. Comparisons also can be made between distance learners in cohort groups and traditional students; and between distance learners in cohort groups and the nontraditional students in traditional educational settings.

Further Study

An in-depth qualitative study of students and their supervisors in this program has been completed. Results of the 38 interviews examining factors affecting student success as well as other issues such as expectations at the beginning of the program, program challenges, program strengths and benefits, course evaluations and competencies implemented, program outcomes, and program recommendations are being analyzed and will be reported at a later date. Both the quantitative and qualitative studies conducted with this population have been supported by a grant from the U.S. Department of Education, Fund for the Improvement of Postsecondary Education (FIPSE).

References

Adelman, C. (1999). Answers in the tool box: Academic intensity, attendance patterns, and bachelor's degree attainment. Office of Educational Research and Improvement. U.S. Department of Education.

Blumenstyk, G. (1994, December 14). Networks to the rescue? The Chronicle of Higher Education. A21-A24.

Chu, H., Martinez, A., & Hinton, B. (1999). Employed adults in a B.S. Ed HRD program options: Who are these students and why are they here? Academy of Human Resource Development 1999 Conference Proceedings (pp. 747-752). Baton Rouge, LA: Academy of Human Resource Development.

Dinmore, I. (1997). Interdisciplinarity and integrative learning: An imperative for adult education. Education,117, 452-467.

Dubois, J. H. (1996). Going to distance. American Association for Adult and Continuing Education.

Ehrmann, S. (1990). Reaching students, reaching resources: Using technologies to open the college. (ERIC Document Reproduction Service No. ED 327 171)

Hirschorn, M. W. (1988). Students over 25 found to make up 45 percent of campus enrollments. The Chronicle of Higher Education. A35.

Keegan, D. (1986). The foundations of distance education. London: Croon Helm.

Ludlow, B., & Duff, M. (1998). Distance education and tomorrow's schools. Bloomington: Phi Delta Kappa Educational Foundation.

National Center for Education Statistics. (1996). The condition of education 1996. Washington, DC: U.S. Department of Education.

Wiersma, W. (1991). Research methods in education: An introduction (5th ed.) Boston: Allyn and Bacon.

Experiences of Web-based Instruction among African-American Students Enrolled in Training and Development Graduate Courses

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The purpose of this study was to describe the online experiences of African-American students participating in web-based training and development graduate program courses. The experiences described in this study give insight as to why African-American students do not participate or continue to participate in web-based courses at the graduate level. The study identified experiences relating to learner-instructor interactions. Conclusions and implications for practice and future research are given.

Keywords: Web-based Instruction, African-American Students, Technology

Historically, cultural, economic, and power-related factors have worked against the success of African-American students in institutions of higher education (Richardson, 1997). The integration of technology may be adding to these factors of African-American student success. Many African-American students are entering higher education without the skills necessary to effectively use the new information technology tools and resources (Resta, 1994; Slater, 1994). Factors such as access, affordability of computer courses, choice of institution, and lack of training have created a "digital divide" in higher education between African-American students and other ethnic groups. The "digital divide", defined as the gap between the numbers of African-American students and other students who have access to computer technology, has become an issue of concern in all areas of education and training. Although the gap of the "digital divide" is narrowing, currently approximately 15 percent of African-American students have access to or own computers, as compared to 55 percent of students nationally (Carlson, 2000). The longer the "digital divide" continues to exist, the farther behind in technology African-American students will fall.

The delivery of instruction through the World Wide Web continues to grow at an exponential rate. Previous research has examined the differences between face-to-face teaching and online teaching (Russell, 1997), learning style changes in a technology based learning environment (Cohen, 1997) and the instructional design of web-based courses (Braden, 1996). Current studies identify access to technology as one of the key factors in creating the "digital divide" (Carlson, 2000). Yet, research has not expanded beyond access as a factor in enhancing the "digital divide". Hence, a major question yet to be explored by the field of Human Resource Development (HRD) is: "What experiences account for African-American students not participating in web-based courses?

According to proponents of computer technology, technology promises inclusion, equality and empowerment. However, based on the research on African-Americans and computers it is less likely that African-American students will be equipped to participate in the information on the Internet. Instead of numerous benefits, for some African-American students the Internet can perpetuate exclusion, inequality, and disenfranchisement (Resta, 1994; Slater, 1994; Richardson, 1997). With a 72 percent rise in the number of distance education programs at colleges and universities, where the primary medium for delivery is the Internet (National Center for Education Statistics, 2000), African-American students may become detoured off the education and training information superhighway. Hence, an investigation of actual online experiences may give some insight as to why African-Americans students do not to participate in courses offered via the World Wide Web.

The purpose of this study was to describe the online experiences of African-American students participating in web-based training and development graduate program courses. The experiences described in this study give insight as to why African-American students do not participate or continue to participate in web-based courses at the graduate level.

Conceptual Framework

While conceptual frameworks exist about African-American students within the traditional classrooms (Burlew,

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Banks, McAdoo, Azibo, 1992; Justiz, Wilson, Bjork, 1994), far less has been written about African-American students in a web-based learning environment. Researchers (Beckles, 1997; Hoffman & Novak, 1998; Kirk & Shoemaker, 1998) have analyzed barriers to Internet access, but no studies have investigated the experiences of African-American students who have completed web-based courses, specifically at the graduate level.

Several models (Holmberg, 1986; Moore, 1989; Moore, 1996) exist concerning the learner in a technological environment. However, in determining the conceptual framework to undergird this study, Moore's (1996) framework and Hoey, Pettitt, and Brawner (1997) were utilized because each focus on the student perceptions in a distance learning environment. These frameworks consist of three components: (1) learner-instructor interaction; (2) learner-learner interaction; (3) learner-content interaction and (4) learner-environment interaction. For the purpose of this study the constructs of learner-instructor, learner-learner, and learner-environment interactions were investigated.

Learner-Instructor Interaction

Moore (1996) describes learner-instructor interaction as a multifaceted interaction. This interaction is between the learner and the instructor where the instructor plans a program of instruction, attempts to motivate students to learn, make presentations, organizes opportunities for learners to acquire relevant skills, evaluates their progress, and provides support and encouragement to the learners.

Learner-Learner Interaction

Learner-learner interaction is seen as the new and challenging component of distance education. Moore (1996) refers to this interaction as "inter-learner interaction between one learner and other learners, alone or in group settings, with or without the real-time presence of an instructor" (p. 22). As determined by Schutte (1997), this dimension is important because it shows that online students actually outperformed students in otherwise identical section of his statistics class by adopting group learning strategies.

Learner-Environment Interaction

Learner-environment interaction is a fourth dimension proposed by Hoey, Pettitt, and Brawner (1997). This interaction involves the relationship between the type of technology employed and the physical and virtual environment created. According to these authors, this aspect of learner interaction is important in determining the learner's comfort level with a particular technology, which can play a great role in determining success or failure in a web-based course. This dimension builds on the work of Smith (1997) who introduced the learner-technology interaction.

Research Questions

The purpose of this study was to describe the online experiences of African-American students participating in web-based training and development graduate program. The following research questions guided this study:

1. What experiences do African-American students enrolled in a training and development graduate program report as they relate to participation in their current web-based course?
2. What experiences do African-American students enrolled in a training and development graduate program report as they relate to participation in future web-based courses?

Research Design

In order to determine the experiences reported by African-American students during their participation in web-based training and development graduate courses, this study utilized a qualitative research paradigm. The objective of using the qualitative paradigm was to identify recurrent patterns in the form of categories.

The study was conducted on a predominately white Research I institution in the south. The participants in this study were graduate students who identified themselves as African-American, Black, or biracial (African-American/other) and have completed a web-based course in a training and development program. A total of ninety

students have completed web-based courses in the program, where fifteen percent (N = 14) of these students were African-American. Of these fourteen African-American students, five completed the online course and nine withdrew from the course prior to completion. Table 1 summarizes the course completion rates of the African-American students.

Table 1. Completion Rates of African-American Students in Web-based Courses in Training and Development Courses

Characteristic	N	%
Total number of students who completed web-based training and development graduate courses	90	100
Total number of African-American students enrolled in web-based courses	14	15
Total number of African-American students who completed web-based courses (from the total of African-American students only)	5	36
Total number of African-American students who did not complete web-based courses (from the total of African-American students only)	9	64

The data was collected from these students by conducting standardized open-ended interviews via an asynchronous electronic discussion board. In the standardized open-ended interviews, the exact wording and sequencing of questions were determined in advance and all students were asked the same questions in the same order. Utilizing this method of interviewing ensured complete responses from each interview and it increased the comparability of the responses (Patton, 1990). For these participants, the electronic discussion interview technique was appropriate because students who participate in online courses are accustomed to and familiar with communicating using an asynchronous electronic discussion tool. Because the ability to communicate in an online environment is a requirement for participation in all web-based courses in the training and development program, the researcher did not select a more traditional means for interviewing.

These participants were asked open-ended questions in relation to motivation and persistence, interaction with other students, interaction with the instructor, interaction with the environment, and the instructional design of the course. These open ended questions, explored six general content areas: interactions with instructor, interaction with other students, social and formal interactions, instructional methods, use of time, and motivation.

The data consisted of electronic text from the responses of each individual interview. The electronic text was verbatim directly from the participants; therefore, no transcribing was necessary. The data analysis was conducted as an activity simultaneously with the data collection and data interpretation. As the verbatim data was collected electronically, it was sorted into categories based on the topics of the structured interview guide. The data in the initial categories were re-coded utilizing the schema from Moore (1996) and Hocy, Pettitt, and Brawner (1997).

Findings

The six general content areas explored during this study; interactions with instructor, interaction with other students, social and formal interactions, instructional methods, use of time, and motivation, were analyzed from the perceptions of the African-American students who participated in web-based training and development courses. Due to space limitations, this paper will only report on the findings related to learner – instructor interactions.

The findings from this study will be presented in two areas:

1. Accessibility and responsiveness of the instructor (learner – instructor interaction)
2. Instructor's expectation of the student (learner – instructor interaction)

Accessibility and Responsiveness of Instructor

Experiences with the accessibility and responsiveness of the instructor during the web-based course emerged throughout each of the interviews. These experiences were represented by statements such as:

- "For one course I was extremely disappointed. There was almost no contact or feedback from the instructors in one course. The format was divided into content instructor and technical instructor. The technical instructor made a few contacts and gave feedback, but the content instructor responded to nothing, not even phone calls. It was very insulting to have a professor flat out ignore you. For the other course, the feedback has been prompt and consistent. The instructor is extremely accessible and encourages students to utilize his on campus office hours if clarification is needed on class topics."
- "Yes, she constantly stayed in contact via e-mail and provided the students with several options when trying to contact her (phone, fax, and etc.)."
- "There were delays in the beginning of the class that made me feel disconnected."
- "There were periods of time in which we had no interaction with the course instructors. They were inaccessible by email, phone, and face to face interaction."
- The majority of the time the instructor and I could not reach each other via email."
- "The class notes were wonderful, very organized, detailed, and always available on the class web site."
- "I was dissatisfied with the down-time. At one point we were not given an assignment for at least three weeks."
- "I did not receive any feedback on any of the work that I turned in. I feel that this would not have been an issue in a traditional classroom setting where I could talk to that teacher face to face."

The accessibility of the instructor as a benefit or barrier to the student taking another web-based course was asked in each interview. Student responses were:

- "It was definitely a barrier."
- "It definitely has me questioning if I want to enroll in another web-based course."
- "Somewhat of a barrier, I have other life activities to manage. It is difficult when one needs an answer to proceed, and the professor's schedule is unknown. It is a frustrating to have to periodically check my computer, and there is not response."
- "Benefit. More accessible than regular office hours."
- "His responsiveness was a benefit."
- "Since this appears to be the way of the new century, I feel I must develop a new set of skills to be successful in a computer environment, particularly being able to trace the structure of communication lines in web site instructional learning activities (to be able to following the design/structural mapping in order to have responses show appropriately for other students and professor's understanding. Fortunately, I possess keyboarding skills, internet access (purchased my own computer to increase availability of access)."

Instructor's Expectation of Students

A second category that emerged from the data from student - instructor interaction was the instructor's expectation of the students. These experiences were represented by statements such as:

- "The expectations were maybe a little too high considering the nature of the instruction."
- "Given the above concern re: design/response structure of the computer-based course, it was a challenge for a "first-timer"; I lacked experience. The instructor did attempt this concern with an "orientation session".

The expectations of the instructor as a benefit or barrier to the student taking another web-based course were also asked in each interview. The following statements represent the responses to this question.

- "I feel that it was a benefit because I know what is expected from participation in this type of course."
- "This experience can not be used as a barrier, I feel I have no choice when the only way for me to have access to a course is limited to being offered computer-based environment. There is no other option but to take the course, as is "on the Internet".

Instructor Fostered an Environment of Active Participation of Students

Active participation of students is a major tenet of adult learning and training. This factor emerged as one experience that affects the African-American student in a Web-based course. The following statements represent these experiences.

- "Active participation of students was encouraged by utilizing project based learning. (Group project and case study requiring the student to interact with others in the field)."
- "The instructor was actively involved in participating in the group forums as a part of learning."
- "It was encouraged but didn't necessarily take place."
- "The instructor stated for the students to respond with questions posting them to the forum for review."
- "Online interaction was strongly encouraged."

Conclusions

This study represents only a small step towards a more comprehensive understanding of African-American students and the impact of technology and education. Although the small sample size does not warrant generalizations, it is evident that the experiences of African-American students participating web-based instruction can be affected by their interactions with instructors. It is this authors viewpoint that although African-American students have progressed in terms of education, technology and the implications and factors that go along with it, technology may continue to hinder African-American students in the future from being included in web-based courses.

This study does not show that the findings are unique to African-American students. The experiences reported by African-American students could be experienced by students of other races or ethnic backgrounds. Hence, validation through a comparative study with students of other ethnic and racial groups would go far to enhance the findings.

Implications for Practice and Research

The current study assists in the identification of experiences of African-American students enrolled a web-based course. Identifying such experiences surrounding accessibility, responsiveness, instructor expectations, and active participation, might aid in the design, development, and delivery of online instruction. Because African-American students come to the web-based learning environment with factors stacked against them, successfully completing a course in this medium can be even a more difficult and stressful experience. This information may aid faculty who teach via the Internet by identifying difficulties in web-based courses that may contribute to course completion rates for African-American students.

This study has implications for future research in several areas. First, similar research should be conducted with other web-based courses in different disciplines and different institutions to determine if these experiences found in this study are perceived throughout other African-American students enrolled in web-based courses. Second, research implications may also exist in the design of web-based instruction to serve the needs of all students. Research focusing on faculty and their ability to teach effectively in an online environment is major implication for research. This implication is of extreme importance because of the increasing number of courses being converted from face-to face to online environments, particularly in higher education HRD programs. Finally, this research also has implication for future research in African-American student retention and attrition, and the extent to which technology and the instructor in a web-based environment may add to student retention in online educational programs.

References

Beckles, C. (1997). Black struggles in cyberspace: Cyber-segregation and Cyber-Nazis. Western Journal of Black Studies, 21, p. 12 – 19.

Braden, R. (1996). The case for linear instructional design and development: A commentary on models, challenges, and myths. Educational Technology, March-April, 5-23.

Burlew, A., Banks, W., McAdoo, H., & Azibo, D. (Eds.). (1992). African American psychology: Theory, research, and practice. Newbury Park: Sage Publications.

Carlson, S. (2000, March 24). Three companies give $101-million for computing at black colleges. The Chronicle of Higher Education, p. A52.

Cohen, V. (1997). Learning styles in a technology rich environment. Journal of Research on Computing in Education, 29, 4, 338 – 349.

Eastmond, D. (1998). Adult learners and internet-based distance education. In B. Cahoon (Ed.), Adult learning and the internet (pp. 33 – 41). San Francisco: Jossey Bass.

Hoey, J., Pettitt, J., & Brawner, C. (1997). Assessing web-based courses at NC State. (http://www2.ncsu.edu/ncsu/Project25/info/assessment.html).

Hoffman, D., & Novak, T. (1998). Bridging the digital divide: The impact of race on computer access and Internet use. (ERIC Document Reproduction Service No. ED 421 563).

Holmberg, B. (1986). Status and trends of distance education. London: Croom-Helm.

Justiz, M., Wilson, R., & Bjork, L. (Eds.). (1994). Minorities in higher education. Phoenix: American Council on Education and the Oryx Press.

Kirk, J., & Shoemaker, H. (1998). Perceived barriers to learning over the Internet. In R. J. Torraco (Ed.), Human Resource Development 1998 Conference Proceedings. Baton Rouge, LA: Academy of Human Resource Development.

Moore, M. (1989). Recruiting and retaining adult students in distance education. In P.S. Cookson (Ed.) New Directions for Continuing Education (No. 41). San Francisco: Jossey Bass.

Moore, M. (1996). Distance education: A systems view. New York: Wadsworth Publishing.

National Center for Education Statistics (2000). Washington, DC: US Government Printing Office. (http://nces.ed.gov).

Patton, M. (1990). Qualitative evaluation and research methods. Newbury Park: Sage Publications.

Resta, P. (1994). Minorities and the new information technologies: Barriers and Opportunities. In M. Justiz, R. Wilson, & L. Bjork (Eds.) Minorities in Higher Education (pp. 64-77). Phoenix: American Council on Education and the Oryx Press.

Richardson, E. (1997). African-American Women Instructors: In a Net. Computers and composition, 14, 279-288.

Russell, T. (1997). The "no significant difference" phenomenon. http://www2.ncsu.edu/oit/nsdsplit.htm

Slater, R. (1994). Will Blacks in higher education be detoured off the information superhighway? Journal of Blacks in Higher Education, 3, 96-99.

Smith, N. (1997). Student satisfaction in distance learning classes. Dissertation Abstracts International, 59, 12A.